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Kyung-Ha Lee

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EXAMINER

HAILE, AWET A

ART UNIT

PAPER NUMBER

2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/735,726	Applicant(s) LEE, KYUNG-HA	
	Examiner AWET HAILE	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7,8,10-25,29 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7,8,10-25,29 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. **Claims 7, 8, 10-12, 13-25, 29 and 31-34** are pending on this application.
2. **Claims 1-6, 9, 26-28, 30 and 35-47** are cancelled.

Response to Argument

3. Applicant's arguments with respect to **claims 7, 8, 10-12, 13-25, 29 and 31-34** have been considered but are moot in view of the new ground(s) of rejection.

Drawing

4. The replacement drawing (FIG 3) were received on 11/21/2007, which replaces FIG 3 previously submitted drawing. This drawing is accepted by examiner.

Claim Rejections – 35 USC§ 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 7, 8 and 10-12** are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al (US 2002/0051442 A1).

Regarding claim 7, Lee'442 discloses, a digital broadcasting system employing a control channel and a plurality of broadcast channels(Fig 5, forward common control channel and new channel), wherein the control channel is provided for transmitting therethrough a synchronous signal section and a data transmission section alternately(Fig, 5, forward common control channel S40 followed by broadcast control channel S41) the system comprising: a transmitter for dividing the data transmission section into a control data section and a secondary broadcast section(Fig 5, broadcast control channel S41, note: the broadcast control channel includes a burst summary message and information about the broadcast channel related to the summery message, see also paragraph 51);

For multiplexing summary information of a secondary broadcast(Fig 5, S41, data burst summary message), control data of the broadcast channels(Fig 5, S41, note; information about the broadcast channel "new channel" is transmitted on the broadcast control channel) and a predetermined synchronous signal(Fig 4, S30 general page message, which includes synchronization signal) by allocating each to the secondary broadcast section, the control data section and the synchronous signal section, respectively(Fig 5, note: the base station transmits a superframe which includes a slot for the data burst summery, information about the new broadcast channel and paging signal);

and for transmitting the multiplexed summary information of the secondary broadcast (data burst summary message), control data of the broadcast channels (control data associated with broadcast control channel) and a predetermined synchronous signal (general paging message) through the control channel (Fig 5, see also paragraphs 44 and 45, both forward common control channel S30 and broadcast control channel S31 are transmitted on the control channel see also paragraph 50-51);

and a receiver for receiving a signal transmitted through the control channel(Fig 5, S40 and S41), determining whether the summary information of the secondary broadcast is present in the secondary broadcast section(see paragraph 50 and 51, Mobile station receiving a slot number of the broadcast control channel and receiving the broadcast channel), and providing the summary information of the secondary broadcast to a user after extracting the information from the secondary broadcast section(Fig 5, S41 and S43, note: the mobile station receives data burst summary message and display to the user, if the user agree to view the corresponding broadcast, the mobile station receives the broadcast on the new channel and display it to the user).

Regarding claim 8, Lee'442 discloses, wherein the transmitter transmits the secondary broadcast corresponding to the summary information of the secondary broadcast(Fig, 5, S42 , broadcast message) comprising a channel number of at least one broadcast channel of the plurality of broadcast channels through the at least one broadcast channel(see paragraph 53, the broadcast message is transmitted on the new broadcast channel) and the receiver receives the at least one broadcast channel, through which the secondary broadcast is transmitted, in accordance

with a user's request(Fig 5 S44, based on the user request the broadcast message is transmitted on the forward supplemental channel).

Regarding claim 10, Lee'442 discloses, wherein the receiver comprises a secondary broadcast conversion circuit for retrieving the channel number of the at least one broadcast channel from the summary information of the secondary broadcast, through which the secondary broadcast is transmitted (paragraph 54, see also fig 5, S42, note: based on the information received from the data burst summary message, the mobile station is receiving the broadcast message on the new channel).

Regarding claim 11, Lee'442 discloses, wherein the summary information of the secondary broadcast comprises a message identifier for identifying the secondary broadcast(paragraph 50, mobile station receiving the slot number of the data burst message), and the receiver comprises a memory for storing the message identifier(paragraph 50 and 51, note: the mobile station process received frames, thus, mobile station have a memory to store the received frame and the new receiving channel information).

Regarding claim 12, Lee'442 discloses, wherein the summary information of the secondary broadcast comprises start and end codes and information representing the summary information size and type(see paragraph 52, the information about the channel through which the broadcast message is transmitted includes, data length, transmission rate).

Claim Rejections – 35 USC§ 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 13-25, 29 and 31-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee'442 in view of Lietsalmi et al (US 6370391 B1).

Regarding claim 13, Lee'442 discloses, a device for receiving a secondary broadcast in a digital broadcasting system employing a control channel(Fig, 5, mobile station receiving data burst summary message) and a plurality of broadcast channels(Fig 5, S41 and S42), the control channel comprising a synchronous signal section and a data transmission section arranged alternately(Fig, 5, forward common control channel S40 followed by broadcast control channel S41), the device comprising: a receiver for receiving signals of the control channel and a channel

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selected by a user from the plurality of broadcast channels(Fig 5, S43 and S44,based on the request of the mobile station broadcast message transmitted on the forward supplemental channel, see also paragraph 56);

a summary information of a secondary broadcast determination means for determining whether summary information of a secondary broadcast is present in the data transmission section of the control channel at a predetermined position thereof(paragraph 50, see also fig 5, the mobile station receiving the slot number of the broadcast control channel and receiving the data burst summary message);

However, Lee'442 failed to teach, a secondary broadcast extractor for extracting the summary information of the secondary broadcast transmitted while being inserted in the data transmission section at the predetermined position thereof; and a summary information of a secondary broadcast reproducer for reproducing the extracted summary information of the secondary broadcast and providing the extracted summary information to the user.

Lietsalmi'391 teaches, a secondary broadcast extractor for extracting the summary information of the secondary broadcast transmitted while being inserted in the data transmission section at the predetermined position thereof(Fig 1, DEMOD 16A, see also column 2 lines 65 – column 4 lines 3, note, DEMO 16 extract(separate) the control broadcast data from the received signals);and a summary information of a secondary broadcast reproducer for reproducing the extracted summary information of the secondary broadcast and providing the extracted summary information to the user(see column 2, lines 52-67, note: mobile station 10 reproduce the index

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message(summary information) using controller 18 and then display the summary information on display 20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of extracting received summary information using demodulator, reproducing and displaying to the user as taught by Lietsalmi'391 into the mobile station of Lee'442, in order to enable a mobile user to get access to the selected one of the cell broadcast messages, since such a method is suggested by Lietsalmi'391(column 2, lines 65-67).

Regarding claim 14, Lee'442 discloses, a secondary broadcast converter for retrieving a broadcast channel number from the extracted summary information of the secondary broadcast through which the secondary broadcast is transmitted(Fig 5, S41 and paragraph 52, mobile station receiving the new channel information from the information transmitted on the broadcast control channel and switching to the new channel), and controlling the receiver to receive a broadcast channel corresponding to the broadcast channel number(Fig 5, S44, the mobile station receiving the broadcast message on from the forward supplemental channel).

Regarding claim 15, Lee'442 discloses, wherein the summary information of the secondary broadcast includes a message identifier for identifying the secondary broadcast (paragraph 50, mobile station receiving the slot number of the data burst message) and the device further comprising a memory for storing the message identifier(paragraph 50 and 51,

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note: the mobile station process received frames, thus, mobile station have a memory to store the received frame and the new receiving channel information).

Regarding claim 16, Lee'442 discloses, wherein the summary information of the secondary broadcast includes start and end codes and information representing the summary information size and type (see paragraph 52, data length, transmission rate and other information's are included on the BCCH).

Regarding claim 17, Lee'442 discloses, a method for receiving a secondary broadcast in a digital broadcasting system employing a control channel (Fig, 5, mobile station receiving data burst summary message) and a plurality of broadcast channels (Fig 5, S41 and S42), the control channel comprising a synchronous signal section and a data transmission section arranged alternately (Fig, 5, forward common control channel S40 followed by broadcast control channel S41);

the method comprising the steps of: receiving the control channel (Fig, 5, mobile station receiving data burst summary message) and a broadcast channel selected by a user from the plurality of broadcast channels, and providing a program of the selected broadcast channel to the user (Fig 5, S43 and S44, based on the request of the mobile station broadcast message transmitted on the forward supplemental channel, see also paragraph 56);

dividing the data transmission section into a control data section and a secondary broadcast section(Fig 5, S41, note; transmitting information about the broadcast channel "new

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channel” and data burst summary message through the broadcast control channel) , searching the secondary broadcast section and determining whether there is summary information of the secondary broadcast(see paragraph 50, based on the slot information about the broadcast control channel searching for the data burst summary message);

However, Lee’442, failed to teach, extracting the summary information of the secondary broadcast from the secondary broadcast section and reproducing the extracted summary information of the secondary_ broadcast and providing the extracted summary information to the user.

Lietsalmi’391, teaches, extracting the summary information of the secondary broadcast from the secondary broadcast section(Fig 1, DEMOD 16A, see also column 2 lines 65 – column 4 lines 3, note, DEMO 16 extract(separate) the control broadcast data from the received signals); and reproducing the extracted summary information of the secondary_ broadcast and providing the extracted summary information to the user(see column 2, lines 52-67, note: mobile station 10 reproduce the index message(summary information) using controller 18 and then display the summary information on display 20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of extracting received summary information using demodulator 16A, reproducing and displaying to the user as taught by Lietsalmi’391 into the mobile station of Lee’442, in order to enable a mobile user to get access to the selected one

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of the cell broadcast messages, since such a method is suggested by Lietsalmi'391(column 2, lines 65-67).

Regarding claim 18, Lee'442 discloses, receiving a secondary broadcast corresponding to the summary information of the secondary broadcast in accordance with the user's request (Fig 5, S43, see also paragraph 56) and providing the secondary broadcast to the user (Fig 5, S44, based on the decision made by the mobile terminal, receiving the broadcast message on the forward supplemental channel).

Regarding claim 19, Lee'442 discloses, determining whether the secondary broadcast corresponding to the summary information of the secondary broadcast is being transmitted through at least one of the plurality of broadcast channels(Fig 5, S40, the mobile station determining whether the secondary broadcast is being transmitted from the forward common control channel, see also paragraph 50).

Regarding claim 20, Lee'442 discloses, checking whether the summary information of the secondary broadcast includes a channel number of the at least one broadcast channel (paragraph 50, note; the mobile receiving the slot number of the secondary broadcast from the F-CCCH).

Regarding claim 21, Lee'442 discloses, displaying whether the secondary broadcast is being transmitted through the at least one broadcast channel(paragraph 54 and 55, note: the mobile station displays the data burst summary information to the user, and the user decides whether or not to view the broadcast message).

Regarding claim 22, Lee'442 discloses, a method for receiving a secondary broadcast in a digital broadcasting system employing a control channel (Fig 5, mobile station receiving data burst summary message)and a plurality of broadcast channels(Fig 5, S41 and S42), the control channel comprising a synchronous signal section and a data transmission section arranged alternately(Fig 5, forward common control channel S40 followed by broadcast control channel S41), the method comprising the steps of;

dividing the data transmission section into a control data section and a secondary broadcast section(Fig 5, broadcast control channel S41, note: the broadcast control channel includes a burst summary message and information about the broadcast channel related to the summary message, see also paragraph 51), and allocating summary information of the secondary broadcast and control data of the broadcast channels to the secondary broadcast section and the control data section respectively(Fig 5, broadcast control channel S41, note: the broadcast control channel includes a burst summary message and information about the broadcast channel related to the summary message, see also paragraph 51);

multiplexing the data transmission section and the synchronous signal section while arranging the data transmission section and the synchronous signal section(Fig 5, sending the general page message with the broadcast control channel information followed by the broadcast control channel) alternately, and transmitting the multiplexed data transmission section and the synchronous signal section through the control channel(Fig 5, S41, note; transmitting information about the broadcast channel “new channel” and data burst summary message through the broadcast control channel);

receiving a signal transmitted through the control channel, and determining whether there is summary information of the secondary broadcast in the secondary broadcast section(paragraph 50, see also fig 5, the mobile station receiving the slot number of the broadcast control channel and receiving the data burst summary message);

However, Lee’442, failed to teach, reproducing the summary information of the secondary broadcast after extracting the summary information from the secondary broadcast section.

Lietsalmi’391, teaches, reproducing the summary information of the secondary broadcast after extracting the summary information from the secondary broadcast section(see column 2, lines 52-67, note: mobile station 10 reproduce the index message(summery information) using controller 18 and then display the summery information on display 20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of reproducing the received index message (summary information) as taught by Lietsalmi'391 into the mobile station of Lee'442, in order to enable a mobile user to get access to the selected one of the cell broadcast messages, since such a method is suggested by Lietsalmi'391(column 2, lines 65-67).

Regarding claim 23, Lee'442 discloses, transmitting a secondary broadcast corresponding to the summary information of the secondary broadcast through at least one of the plurality of broadcast channels(Fig 5, S41, data burst summary message); and receiving a secondary broadcast transmitted through the at least one broadcast channel in accordance with a user's request, and providing the secondary broadcast to the user(Fig 5, S44, based on the decision made by the mobile terminal receiving the broadcast message on the forward supplemental channel).

Regarding claim 24, Lee'442 discloses, checking whether the summary information of the secondary broadcast includes a channel number of the at least one broadcast channel (paragraph 50, note; the mobile receiving the slot number of the secondary broadcast from the FCCCH).

Regarding claim 25, Lee'442 discloses, displaying whether the secondary broadcast is being transmitted through the at least one broadcast channel(paragraph 54 and 55, note: the

mobile station displays the data burst summary information to the user, and the user decides whether or not to view the received message).

Regarding claim 29, Lee'442 failed to teach, comparing the summary information of the secondary broadcast with previously received summary information of the secondary broadcast to determine whether the summary information and previously received summary information are identical; and preventing the display of the summary information of the secondary broadcast when the summary information of the secondary broadcast and previously received summary information are identical.

However, Lietsalmi'391, teaches, further comprising the steps of: comparing the summary information of the secondary broadcast with previously received summary information of the secondary broadcast to determine whether the summary information and previously received summary information are identical(see column 12, lines 5-20: note: mobile station 10 checks whether or not new emergency message is present); and preventing the display of the summary information of the secondary broadcast when the summary information of the secondary broadcast and previously received summary information are identical(column 12, lines 5-35, note: the mobile station 10 start receiving the emergency signal only if it's new).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of comparing the previous index message with the new index message to check on new emergency messages as taught by Lietsalmi'391 into the

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mobile station of Lee'442, in order to enable a mobile user to get access to the selected one of the cell broadcast messages, since such a method is suggested by Lietsalmi'391(column 2, lines 65-67).

Regarding claim 31, Lee'442 discloses, storing the message identifier included in the summary information of the secondary broadcast in the memory(paragraph 50 and 51, note: the mobile station process received frames, thus, mobile station have a memory to store the received frame and the new receiving channel information).

Regarding claim 32, Lee'442 discloses, wherein the summary information comprises start and end codes (see paragraph 52, Walsh codes, length of the data and other infractions transmitted on the BCCH).

Regarding claim 33, Lee'442 discloses, wherein the step of searching a secondary broadcast section in the data transmission section of the control channel to determine whether there is summary information of the secondary broadcast further includes the step of checking whether the secondary broadcast section includes the start code (paragraph 50, note: the mobile station searches for the slot number of BCCH on the general page message, which contains the data burst summary message).

Regarding claim 34, Lee'442 discloses, storing a broadcast channel number of a broadcast channel selected by the user(paragraph 50 and 51, note: the mobile station process

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received frames, thus, mobile station have a memory to store the received frame and the new receiving channel information).

However, Lietsalmi'391, resuming receipt of the previous broadcast channel, when a user inputs a request to terminate watching of the secondary broadcast (Fig 18A, manual acknowledgment request, the mobile station 10, terminates a broadcast message up on a user choice, note: terminating a new broadcast message will enable the mobile station on a new index searching mode, which includes receiving the S-BCCH broadcast message).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of enabling a user to terminate a broadcast channel continuing to view the previous channel as taught by Lietsalmi'391 into the mobile station of Lietsalmi'391, in order to enable a mobile user to get access to the selected one of the cell broadcast messages, since such a method is suggested by Lietsalmi'391(column 2, lines 65-67).

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, Maze et al (US 5557338), Logston et al (US 5481542), Arsenault et al (US 7191461 B1), Obuchi (US 6741293 B1), Engel (US 5594938), Benedittis (US 2003/0076812 A1), Shimoji et al (US 6757911 B1) and Zidel(US 6330436 B1) are recited to show secondary broadcasting.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AWET HAILE whose telephone number is (571)270-3114. The examiner can normally be reached on Monday through Friday 8:30 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MOE AUNG can be reached on (571)272-3474. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)? If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AWET HAILE
Examiner
Art Unit 2616

/Aung S. Moe/
Supervisory Patent Examiner, Art Unit
2616